

FIGURE 1

1	ATGTCAGTGGGAGCCATGAAGAGGAGTGGGGAGGGCAGTTGGGCTTGGAGGGCGGACAGC	60
61	GGCTGCCAGGCTACGGAGGAAGACCCCTTCCCGACTGCGGGCTTGGCTCCGGGACAA	120
121	GGTGGCAGCGCTGGAGGCTGCCGAGCCTGCGTGGTGGAGGGAGCTCAGCTCGGTTG	180
181	TGGGAGCAGGCGACCGGCACTGGCTGGAATGGACCTGGAAGCCTCGCTGCTGCCCACTGGT	240
241	CCCAATGCCAGCAACACCTCTGATGGCCCCGATAACCTCACTTCAAGCAGGATCACCTCCT	300
301	CGACGGGAGCATCTCCTACATCAACATCATCATGCCCTTCGGTGTTCGGCACCATCTGC	360
361	CTCCTGGGCATCATCGGGAACCTCCACGGTCATCTTCGCGGTCGTGAAGAAGTCCAAGCTG	420
421	CAC TGGTGCAACAACGTCCCCGACATCTTCATCATCAACCTCTCGGTAGTAGATCTCCTC	480
481	TTTCTCCTGGGCATGCCCTTCATGATCCACCAGCTCATGGCAATGGGGTGTGGCACTTT	540
541	GGGAGACCATGTGCACCCCTCATCACGGCCATGGATGCCAATAGTCAGTTCACCAGCAC	600
601	TACATCCTGACCGCCATGGCCATTGACCGCTACCTGGCCACTGTCCACCCCATCTCTTCC	660
661	ACGAAGTTCGGAGAGCCCTCTGTGGCCACCCCTGGTGATCTGCCCTCCTGTGGCCCTCTCC	720
721	TTTCATCAGCATCACCCCTGTGTGGCTGTATGCCAGACTCATCCCCCTTCCAGGAGGTGCA	780
781	GTGGCTGCGGCATACGCCCTGCCCAACCCAGACACTGACCTCTACTGTTTACCCCTGTAC	840
841	CAGTTTTCCTGGCCTTTGGCCCTGCCCTTTTGTGGTCATCACAGCCGATACGTGAGGATC	900
901	CTGCAGCGCATGACGTCCCTCAGTGGCCCCCGCCTCCAGCGCAGCATCCGGCTGCGGACA	960
961	AAGAGGTGACCCGACAGCCATCGCCATCTGTCTGGTCTTCTTGTGTGCTGGGCACCC	1020
1021	TACTATGTGCTACAGCTGACCCAGTTGTCCATCAGCCGCCCGACCCCTCACCTTTGTCTAC	1080
1081	TTATACAATGCGGCCATCAGCTTGGGCTATGCCAACAGCTGCCCTCAACCCCTTTGTGTAC	1140
1141	ATCGTGCTCTGTGAGACGTTCCGCAACGCTTGGTCCCTGTCCGTGAAGCCTGCAGCCCCAG	1200
1201	GGGCAGCTTCGCGCTGTCAGCAACGCTCAGACGGCTGACGAGGAGGACAGAAAGCAAA	1260
1261	GGCACCTGA	1269

1	M S V G A M K K G V G R A V G L G G G S	20
21	G C Q A T E E D P L P D C G A C A P G Q	40
41	G G R R W R L P Q P A W V E G S S A R L	60
61	W E Q A T G T G W M D L E A S L L P T G	80
81	P N A S N T S D G P D N L T S A G S P P	100
101	R T G S I S Y I N I I M P S V F G T I C	120
121	L L G I I G N S T V I F A V V K K S K L	140
141	H W C N N V P D I F I I N L S V V D L L	160
161	F L L G M P F M I H Q L M G N G V W H F	180
181	G E T M C T L I T A M D A N S Q F T S T	200
201	Y I L T A M A I D R Y L A T V H P I S S	220
221	T K F R K P S V A T L V I C L L W A L S	240
241	F I S I T P V W L Y A R L I P F P G G A	260
261	V G C G I R L P N P D T D L Y W F T L Y	280
281	Q F F L A F A L P F V V I T A A Y V R I	300
301	L Q R M T S S V A P A S Q R S I R L R T	320
321	K R V T R T A I A I C L V F F V C W A P	340
341	Y Y V L Q L T Q L S I S R P T L T F V Y	360
361	L Y N A A I S L G Y A N S C L N P F V Y	380
381	I V L C E T F R K R L V L S V K P A A Q	400
401	G Q L R A V S N A Q T A D E E R T E S K	420
421	G T	422

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FIGURE 3

1	M S V G A M K K G V G R A V G L G G G S	20
21	G C Q A T E E D P L P D C G A C A P G Q	40
41	G G R R W R L P Q P A W V E G S S A R L	60
61	W E Q A T G T G W M D L E A S L L P T G	80
81	P N A S N T S D G P D N L T S A G S P P	100
101	R T G S I S Y I N <u>I I M P S V E G T I C</u>	120
	I	
121	<u>L L G I I G N S T V I F A V V K K S K L</u>	140
	II	
141	H W C N N V P D <u>I F I I N L S V V D L L</u>	160
161	<u>F L L G M P F M I H Q L M G N G V W H F</u>	180
181	G E T M C T L I T A M D <u>A N S O F T S T</u>	200
	III	
201	<u>Y I L T A M A I D R Y L A T V H P I S S</u>	220
221	T K F R K P S <u>V A T L V I C L L W A L S</u>	240
	IV	
241	<u>F I S I T P V W L Y A R L I P F P G G A</u>	260
261	<u>V G C G I R L P N P D T D L Y W E T L Y</u>	280
	V	
281	<u>O F F L A F A L P F V V I T A A Y V R I</u>	300
301	<u>L Q R M T S S V A P A S Q R S I R L R T</u>	320
	VI	
321	K R <u>V T R T A I A I C L V F F V C W A P</u>	340
341	<u>Y Y V L O L T O L S I S R P T L T F V Y</u>	360
	VII	
361	<u>L Y N A A I S L G Y A N S C L N P F V Y</u>	380
381	<u>I V L C E T F R K R L V L S V K P A A Q</u>	400
401	G Q L R A V S N A Q T A D E E R T E S K	420
421	G T	422

FIGURE 4

1 GCAGGGACCTGCACCGGCTGCATGGATCTGCAAAACCTCGTTGCTGTCCACTGGCCCCAA 60
61 TGCCAGCAACATCTCCGATGGCCAGGATAATCTCACATTTGCCGGGTACCTCCTCGCAC 120
121 AGGGAGTGTCTCCTACATCAACATCATTTATGCCCTTCCGTGTTTGGTACCATCTGTCTCCT 180
181 GGGCATCGTGGGAAACTCCACGGTCATCTTTGCTGTGGTGAAGAAGTCCAAGCTACACTG 240
241 GTGCAGCAACGTCCCGACATCTTCATCATCAACCTCTCTGTGGTGGATCTGCTCTTCCCT 300
301 GCTGGGATGCCCTTTCATGATCCACCAAGCTCATGGGAACGGCTGTGGCATTGCGGA 360
361 AACCATGTGCACCCCTCATCACAGCCATGGACGCCAACAGTCAGTTCAC TAGCACCTACAT 420
421 CCTGACTGCCATGACCATTGACCGCTACTTGGCCACCGTCCACCCCATCTCCTCCACCAA 480
481 GTTCCGGAAGCCCTCCATGGCCACCCCTGGTGATCTGCCTCCTGTGGGCGCTCTCCTTCAT 540
541 CAGTATCACCCCTGTGTGGCTCTACGCCAGGCTCATTTCCCTTCCCCAGGGGTGCTGTGGG 600
601 CTGTGGCATCCGCCTGCCAAACCCGGACACTGACCTCTACTGGTTCACCTCTGTACCAGTT 660
661 TTTCCTGGCCCTTTGCCCTTCCGTTTGTGGTCAATTACCGCCGCATACGTGAAAATACTACA 720
721 GCGCATGACGTCTTCGGTGGCCCCCAGCCTCCCCAACGCAGCATCCGGCTTCGGACAAAGAG 780
781 GGTGACCCGCACGGCCATTGCCATCTGTCTGGTCTTCTTTGTGTGCTGGGCACCCCTACTA 840
841 TGTGCTGCAGCTGACCCAGCTGTCCATCAGCCGCCCGACCCCTCACGTTTGTCTACTTGTA 900
901 CAACGGGCCATCAGCTTGGGCTATGCTAACAGCTGCCCTGAACCCCTTTGTGTACATAGT 960
961 GCTCTGTGAGACCTTTTCGAAAACGCTTGGTGTGTGTCAGTGAAGCCTGCAGCCCCAGGGCA 1020
1021 GCTCCGCACGGTCAGCAACGCTCAGACAGCTGATGAGGAGAGGACAGAAAGCAAGGCAC 1080
1081 CTGACAAATTCCCCAGTCGCCTCCAAGTCAGGCCACCCCATCAAAACCGTGGGGAGAGATAC 1140
1141 TGAGATTAAACCCCAAGGCTACCCCTGGGAGAATGCAGAGGCTGGAGGCTGGGGGCTTGTAG 1200
1201 CAACCACATTCCAC 1214

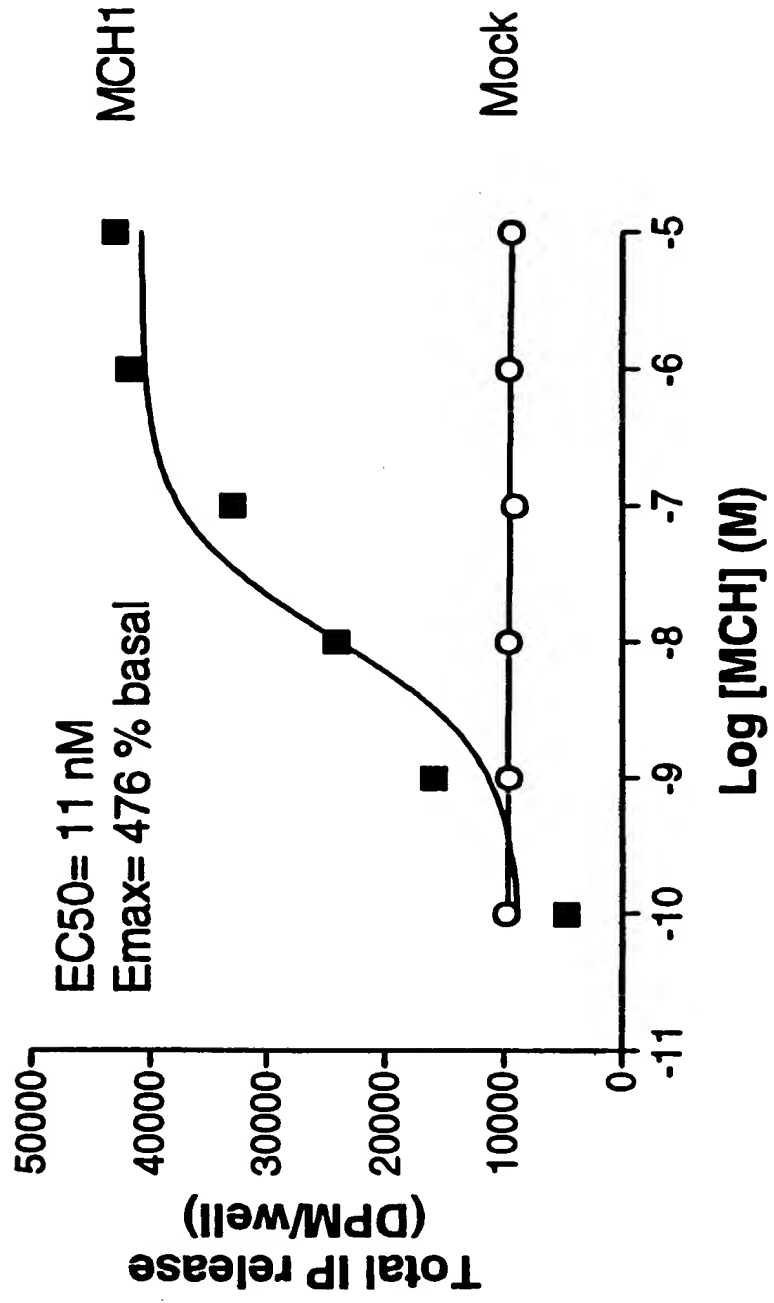
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FIGURE 5

1	20	G
21	40	D I N
41	60	S Y N T I
61	80	I S V G V P F I I
81	100	N V V N M C T M P S V L P A
101	120	S S I S G M T R I G L M T R Q A E T
121	140	A G G I C L T L F S C F R V V N L L *
141	160	N T L W L L E I K I G F Q R Y Y V Q T
161	180	P R L H F G E Y T F V Q L K Y Y I G G
181	200	G P C L L F T S S A Y I T P Y Y Q K
201	220	T P I K L H S S L G L K R A V V A S
221	240	S S T K S D W T I S A G T V L W F F A E
241	260	L G G K V V F P L W P F Y R C T P P T
261	280	L P F K V G Q H L F W A I V L N K R
281	300	S L V V S G N S V L P Y A S F T L V E
301	320	T T S V L G N A T C I L T R F P C S E
321	340	Q L P A N M A A I L I D I Q V R S L D
341	354	L N M F I I Q A R Y L A R T V P A C I S Y A L T

FIGURE 6

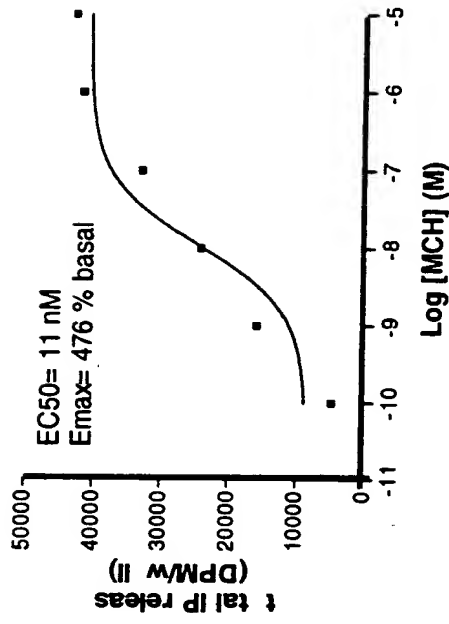
**IP release in MCH1- and
mock-transfected Cos-7 cells**



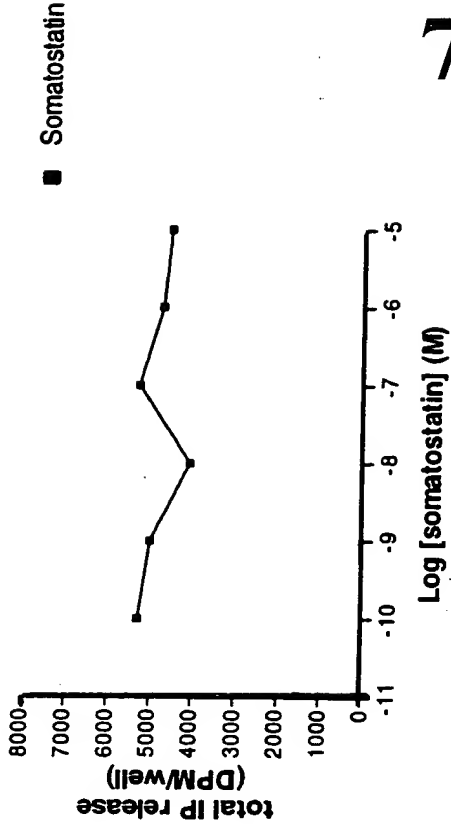
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FIGURE 7

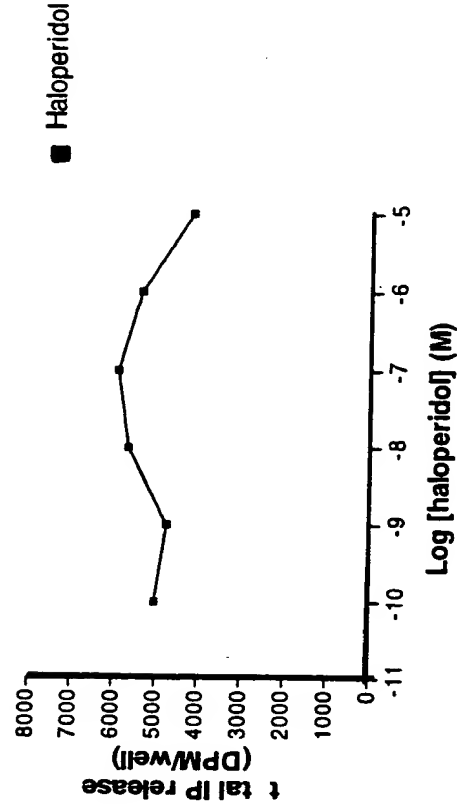
IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98



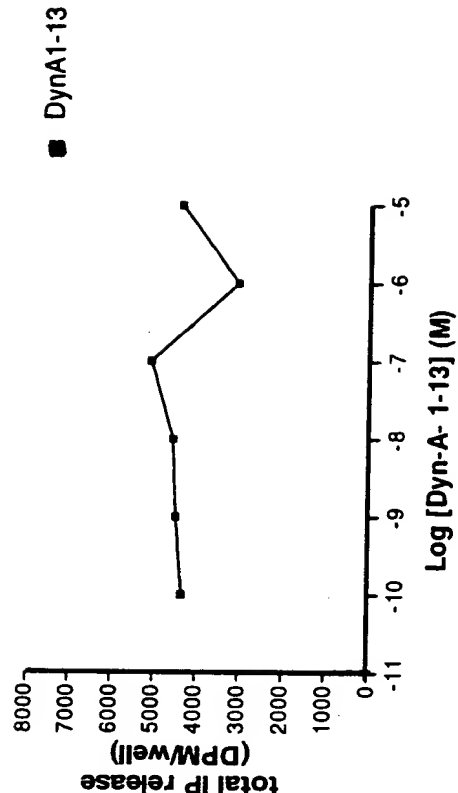
IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98



IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98

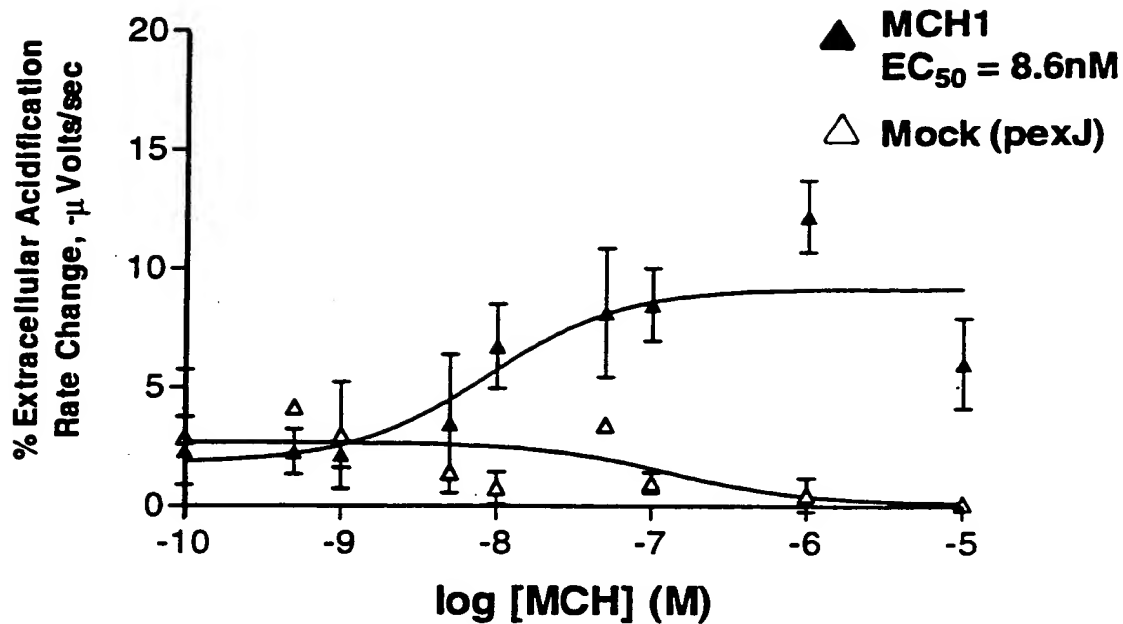


IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98



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FIGURE 8 **8/27**
Micr physi met r Resp nse
CHO cells



Microphysiometer Response
CHO cells

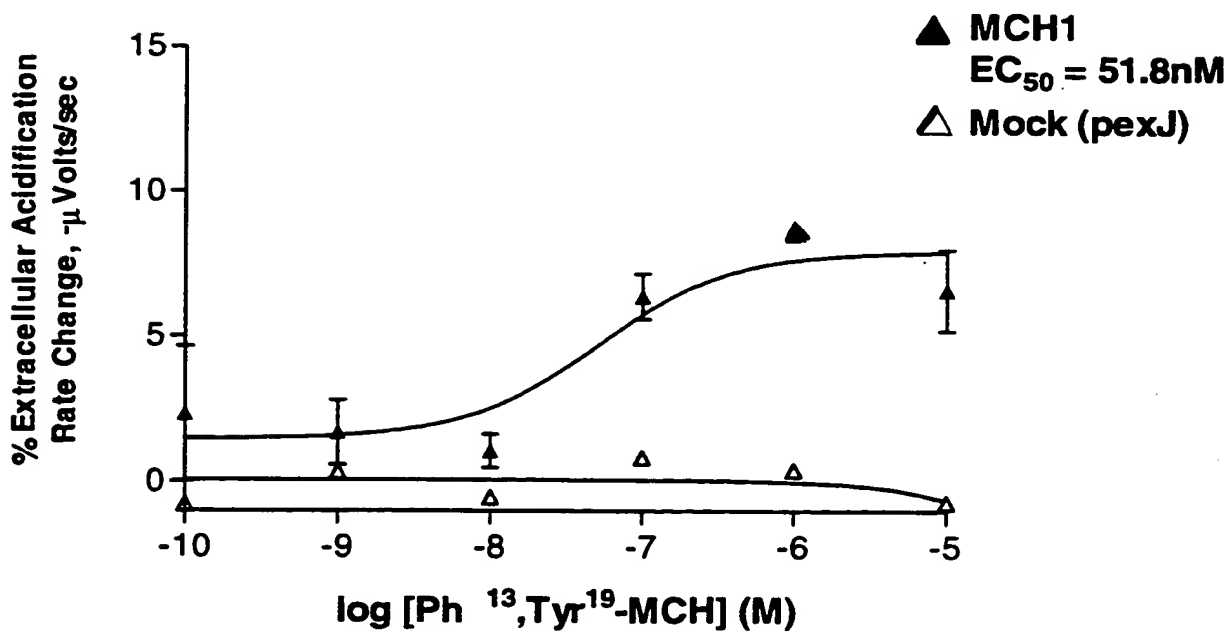
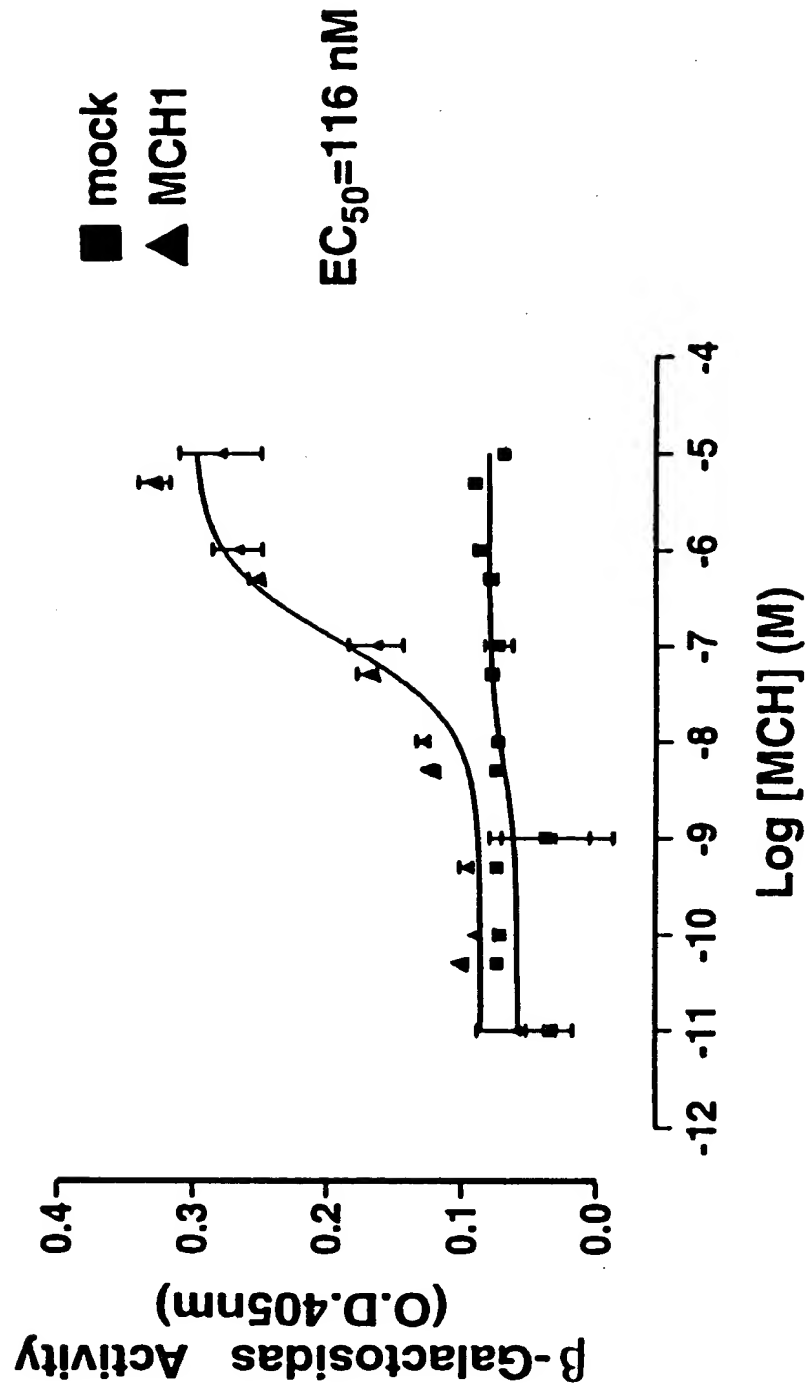


FIGURE 9

Agonist-Mediated c-fos- β -gal Activity in Cos-7 Cells

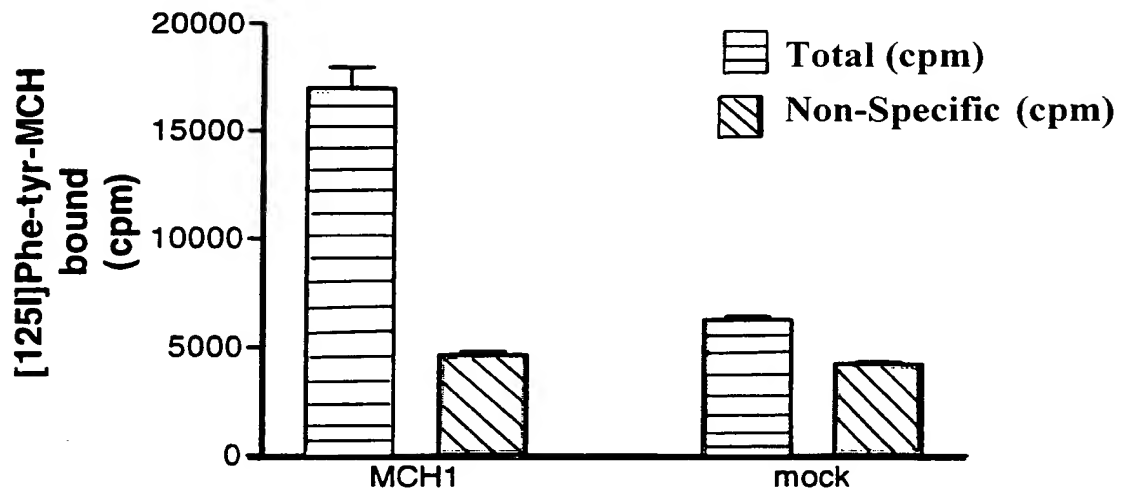


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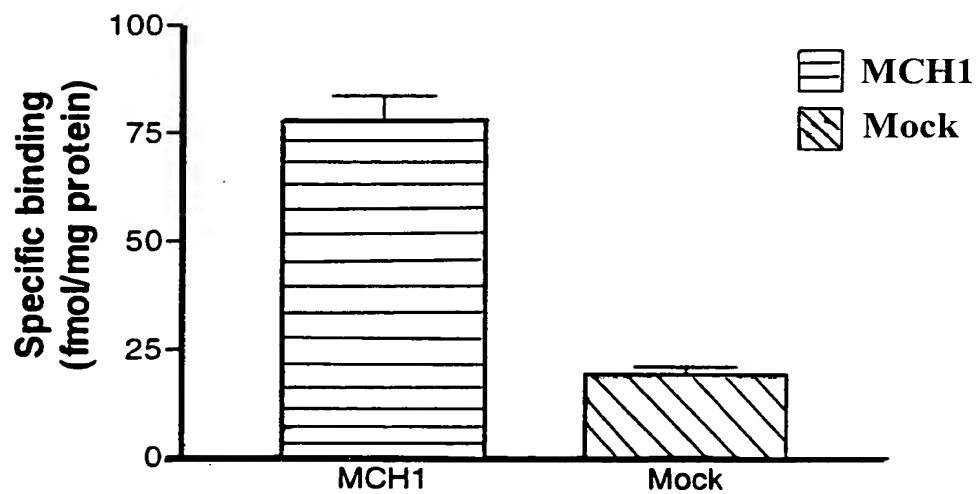
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FIGURE 10

**[¹²⁵I]Phe13-Tyr19-MCH
binding on transiently
transfected Cos-7 cells**



**[¹²⁵I]Phe13-Tyr19-MCH
binding on transiently
transfected Cos-7 cells**



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FIGURE 11

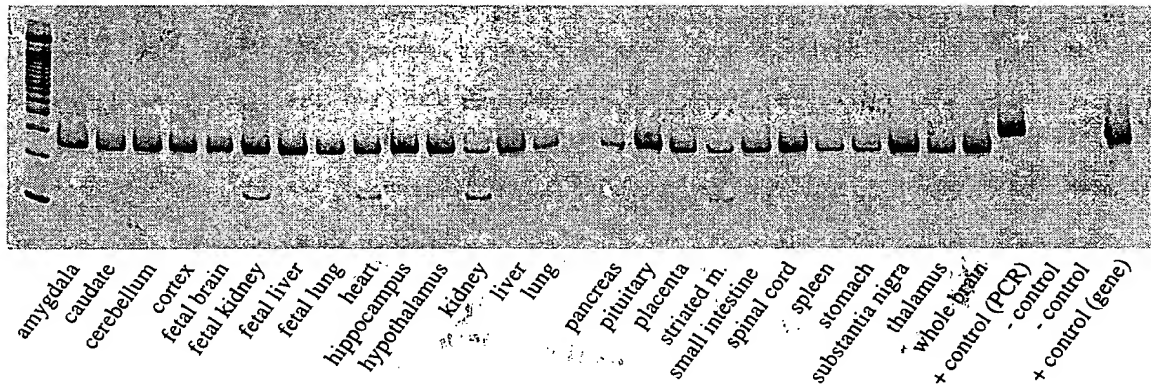


FIGURE 12

TL231	1	MSVGAMKKGV	GRAVGLGGGS	GCQATEEDPL	PDCGACAPGQ	40
R106		MSVGAMKKGV	GRAVGLGGGS	GCQATEEDPL	PDCGACAPGQ	
R114		MSVGAaKKGV	GRAVGLGGGS	GCQATEEDPL	PDCGACAPGQ	
BO120		~~~~~	~~~~~	~~~~~	~~~~~	

TL231	41	GRRWRLLPQ?	AWVEGSSARL	WEQATGTGWM	DLEASLLPTG	80
R106		GRRWRLLPQ?	AWVEGSSARL	WEQATGTGwa	DLEASLLPTG	
R114		GRRWRLLPQ?	AWVEGSSARL	WEQATGTGwa	DLEASLLPTG	
BO120		~~~~~	~~~~~	~~~~~M	DLEASLLPTG	

TL231	81	PNASNTSDG?	DNLTSA GSPP...	100
R106		PNASNTSDG?	DNLTSA GSPP...	
R114		PNASNTSDG?	DNLTSA GSPP...	
BO120		PNASNTSDG?	DNLTSA GSPP...	

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FIGURE 13

[illegible]

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FIGURE 14

[illegible]

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FIGURE 15

1	M	D	L	E	A	S	L	P	T	G	P	N	A	S	N	T	S	D	G	20	
21	P	D	N	L	T	S	A	G	S	P	P	R	T	G	S	I	S	Y	I	N	40
41	I	I	M	P	S	V	F	G	T	I	C	L	L	G	I	I	G	N	S	T	60
61	V	I	F	A	V	V	K	K	S	K	L	H	W	C	N	N	V	P	D	I	80
81	F	I	I	N	L	S	V	V	D	L	L	F	L	L	G	M	P	F	M	I	100
101	H	Q	L	M	G	N	G	V	W	H	F	G	E	T	M	C	T	L	I	T	120
121	A	M	D	A	N	S	Q	F	T	S	T	Y	I	L	T	A	M	A	I	D	140
141	R	Y	L	A	T	V	H	P	I	S	S	T	K	F	R	K	P	S	V	A	160
161	T	L	V	I	C	L	L	W	A	L	S	F	I	S	I	T	P	V	W	L	180
181	Y	A	R	L	I	P	F	P	G	G	A	V	G	C	G	I	R	L	P	N	200
201	P	D	T	D	L	Y	W	F	T	L	Y	Q	F	F	L	A	F	A	L	P	220
221	F	V	V	I	T	A	A	Y	V	R	I	L	Q	R	M	T	S	S	V	A	240
241	P	A	S	Q	R	S	I	R	L	R	T	K	R	V	T	R	T	A	I	A	260
261	I	C	L	V	F	F	V	C	W	A	P	Y	Y	V	L	Q	L	T	Q	L	280
281	S	I	S	R	P	T	L	T	F	V	Y	L	Y	N	A	A	I	S	L	G	300
301	Y	A	N	S	C	L	N	P	F	V	Y	I	V	L	C	E	T	F	R	K	320
321	R	L	V	L	S	V	K	P	A	A	Q	G	Q	L	R	A	V	S	N	A	340
341	Q	T	A	D	E	E	R	T	E	S	K	G	T								353

FIGURE 16

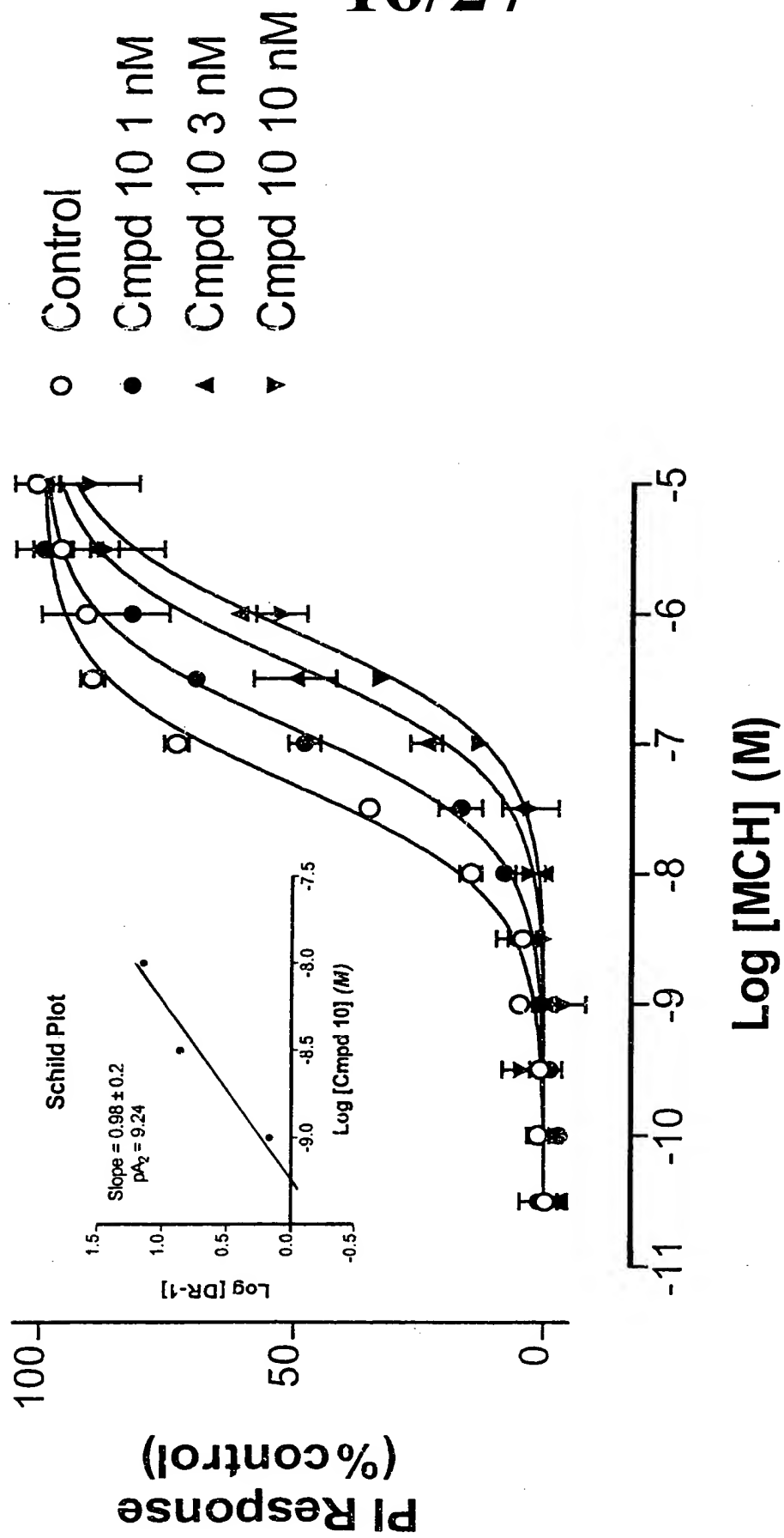
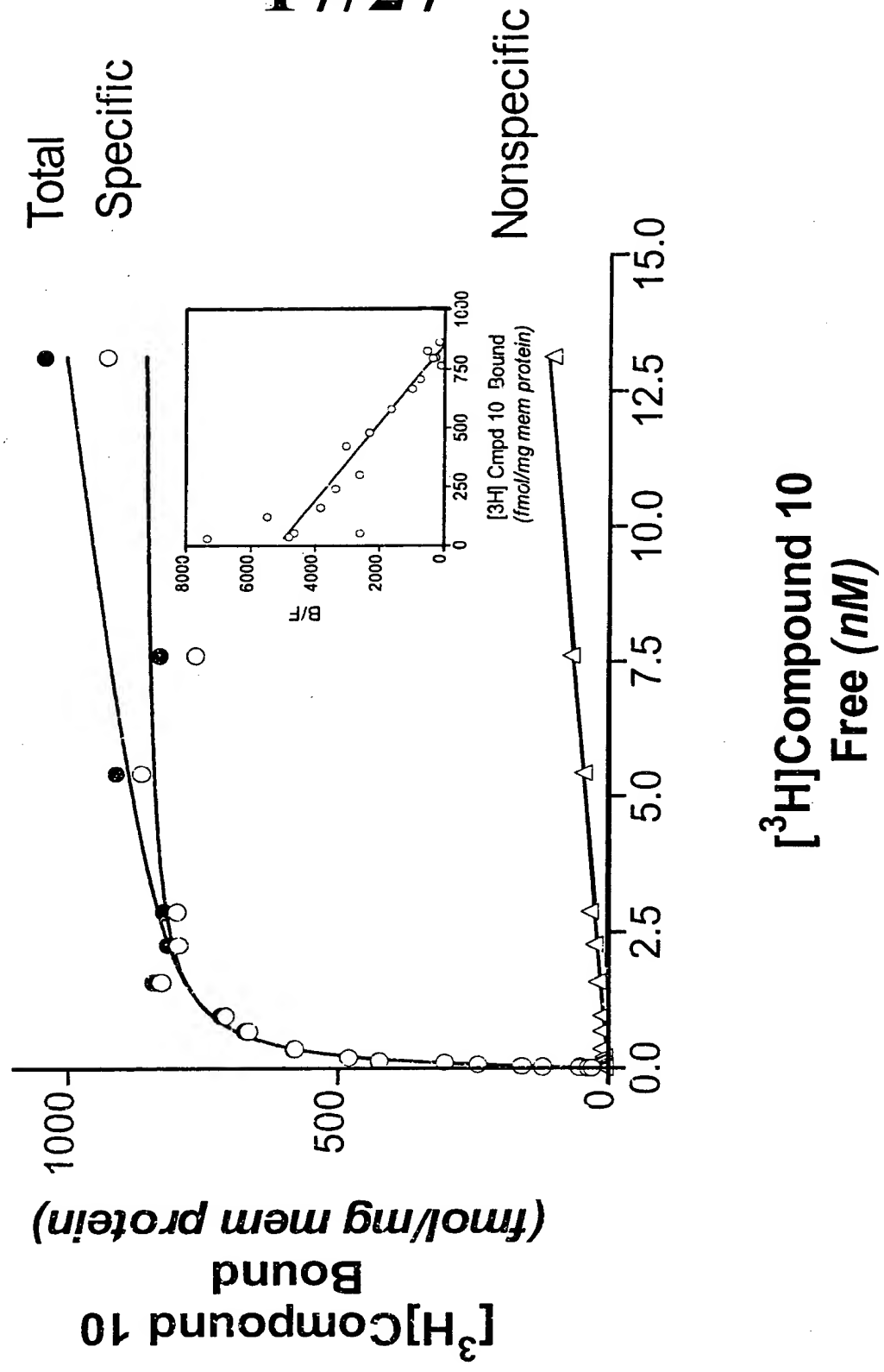
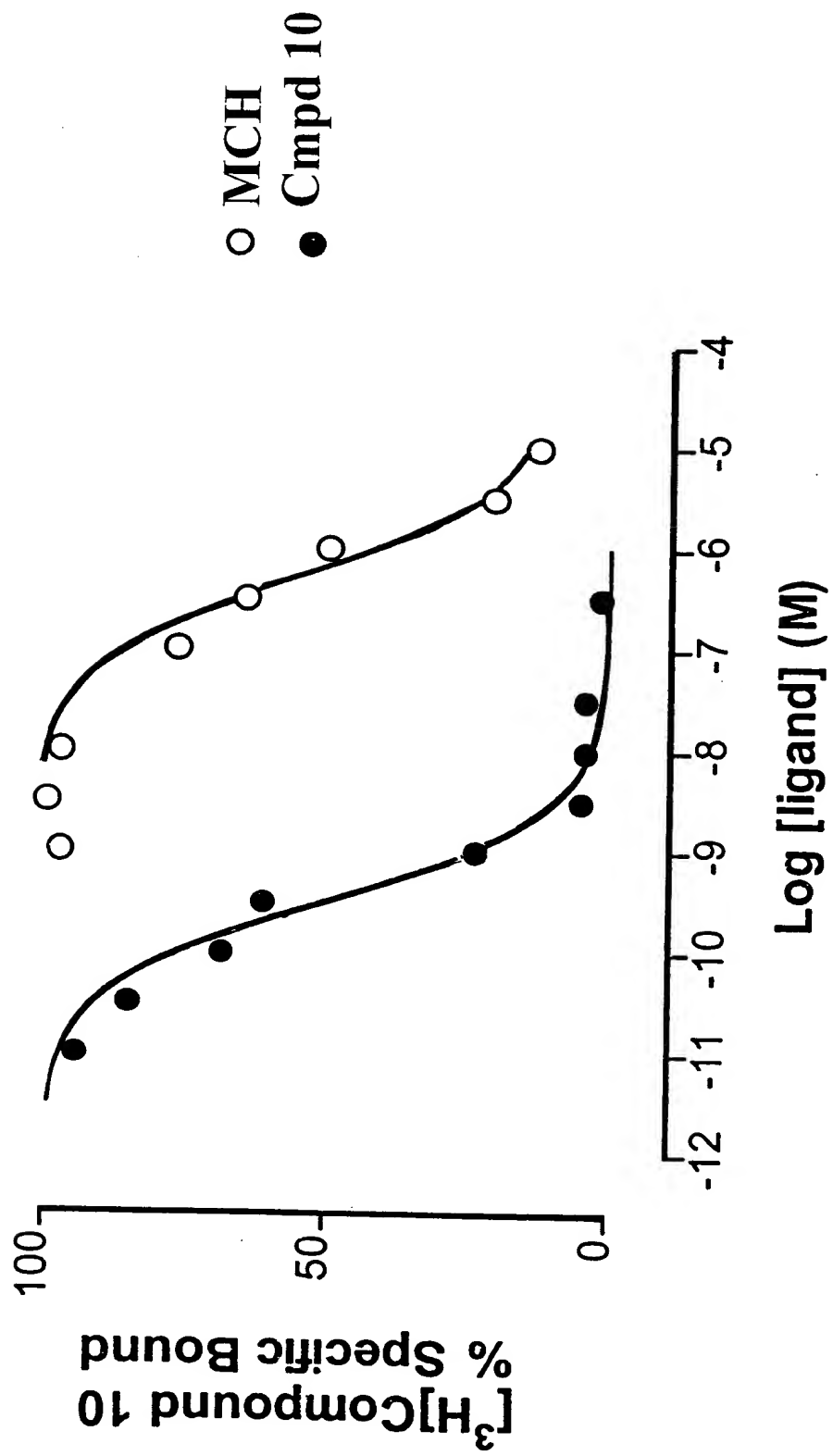


FIGURE 17



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FIGURE 18



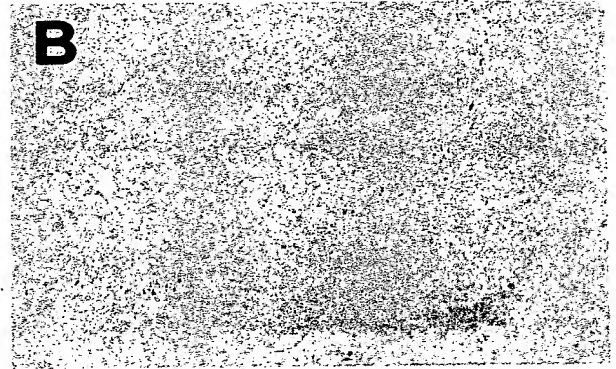
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FIGURE 19

**Total MCH1
Receptor Binding**

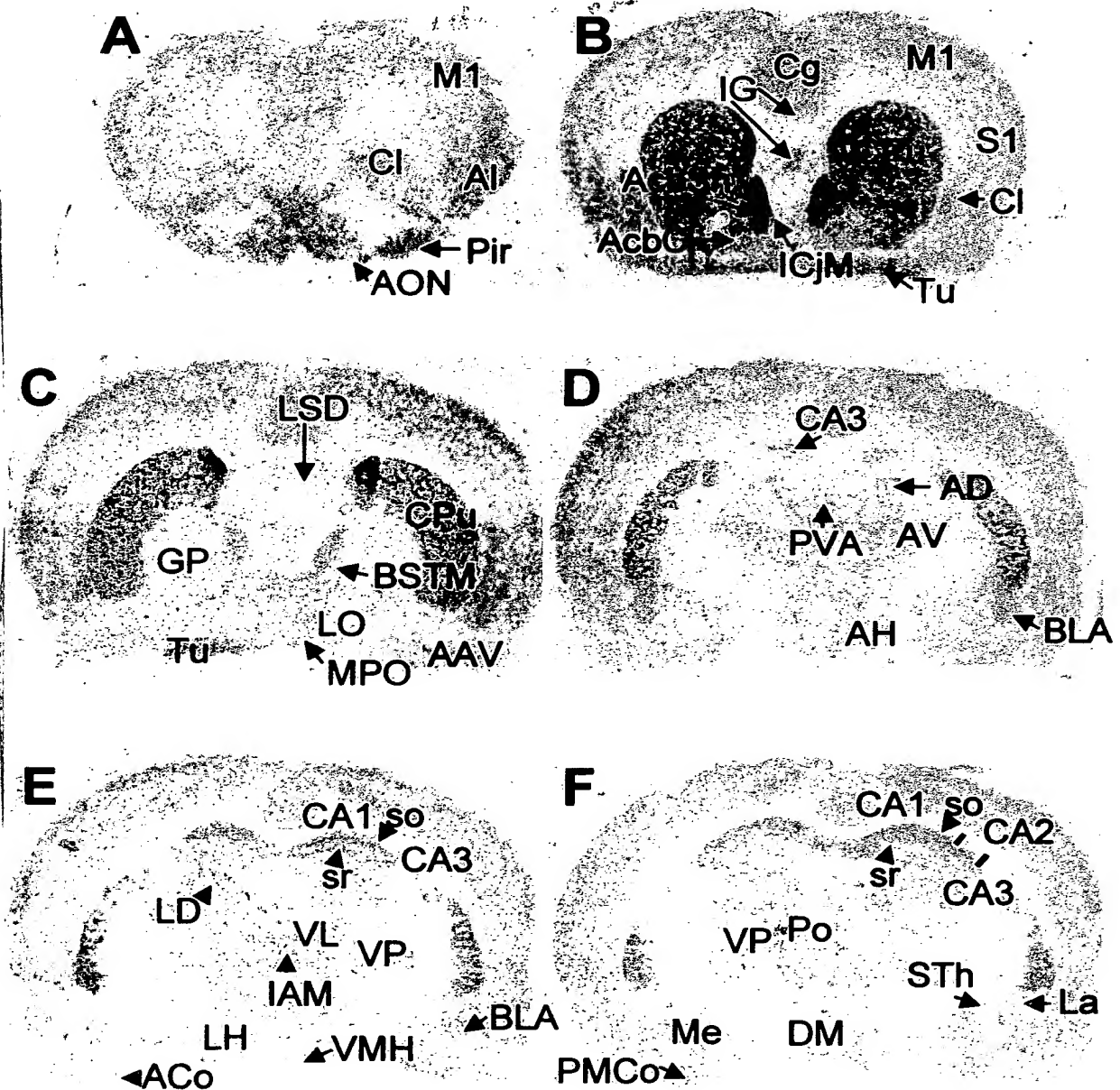


Nonspecific binding



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FIGURE 20A



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FIGURE 20B

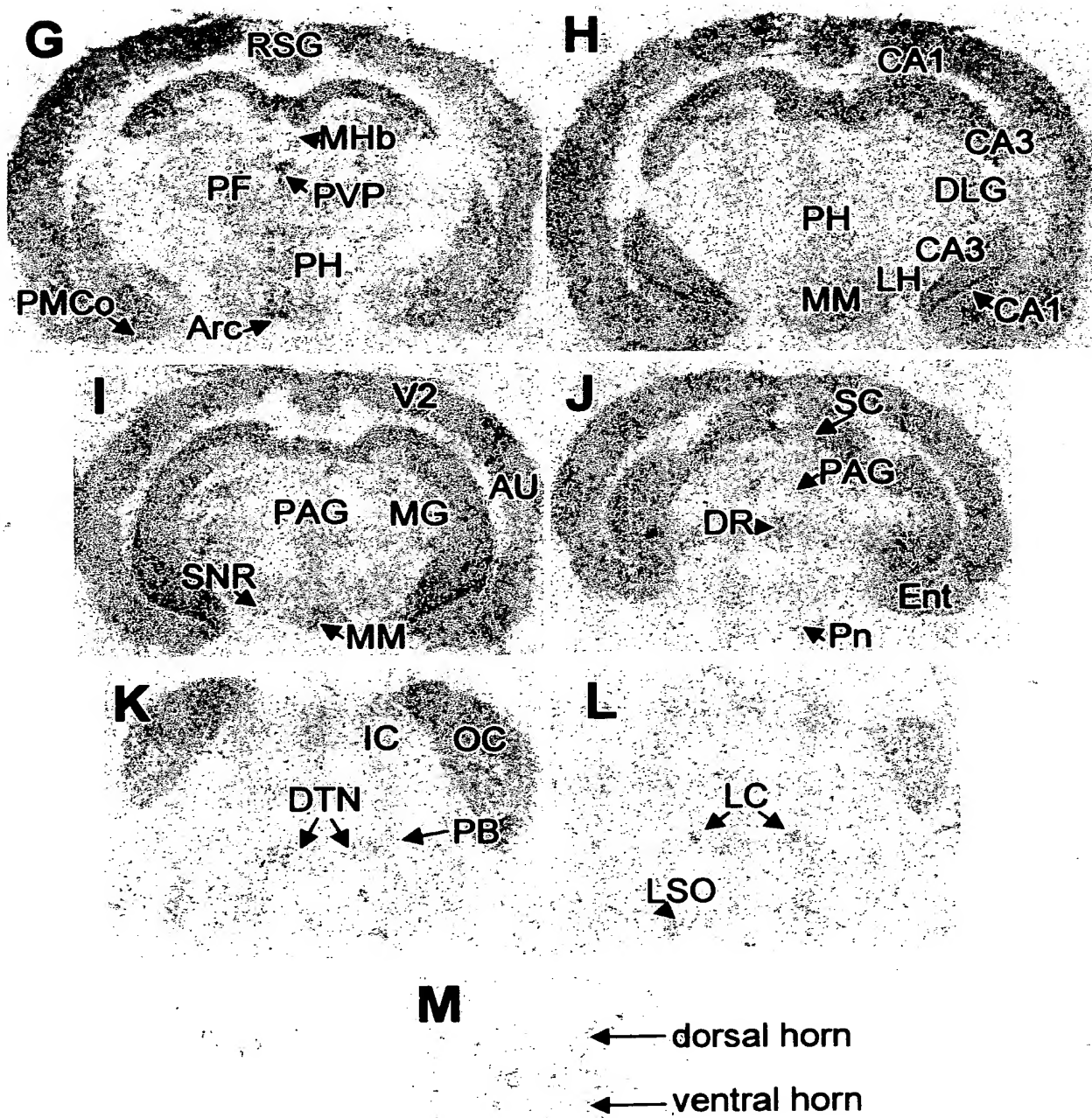
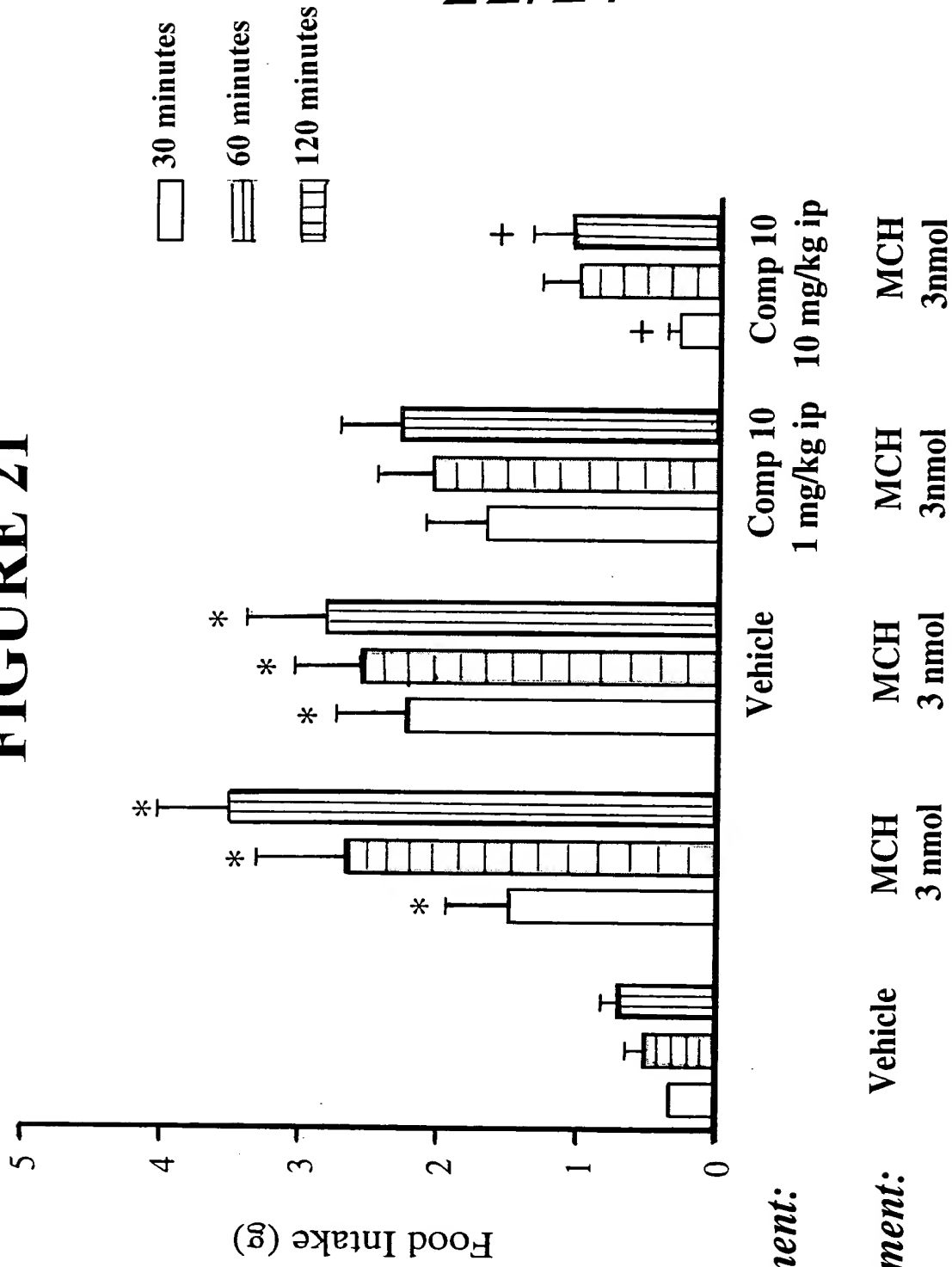


FIGURE 21



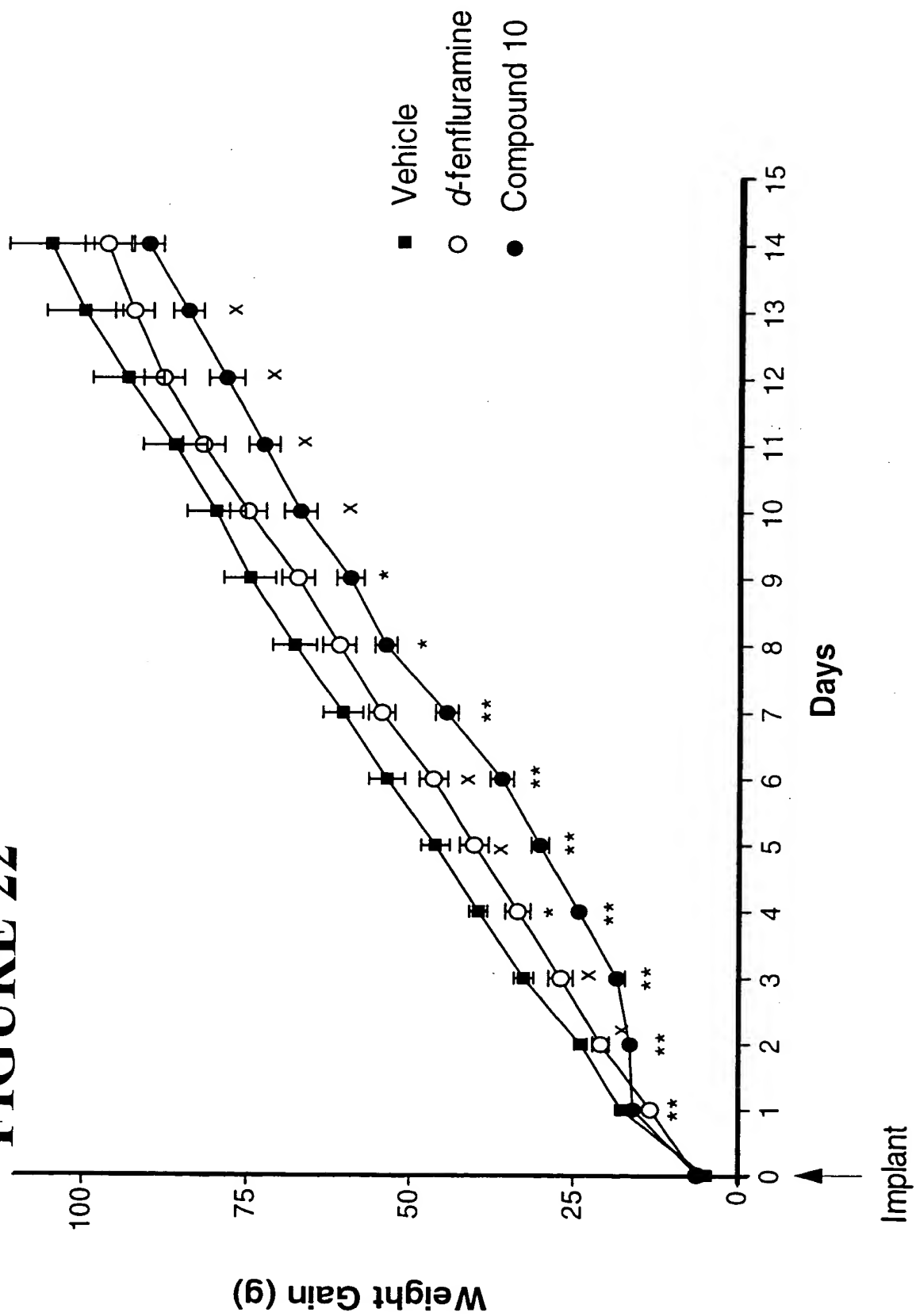
i.p. treatment:

i.c.v. treatment:

* sig. > than vehicle
 + sig. < than veh+MCH

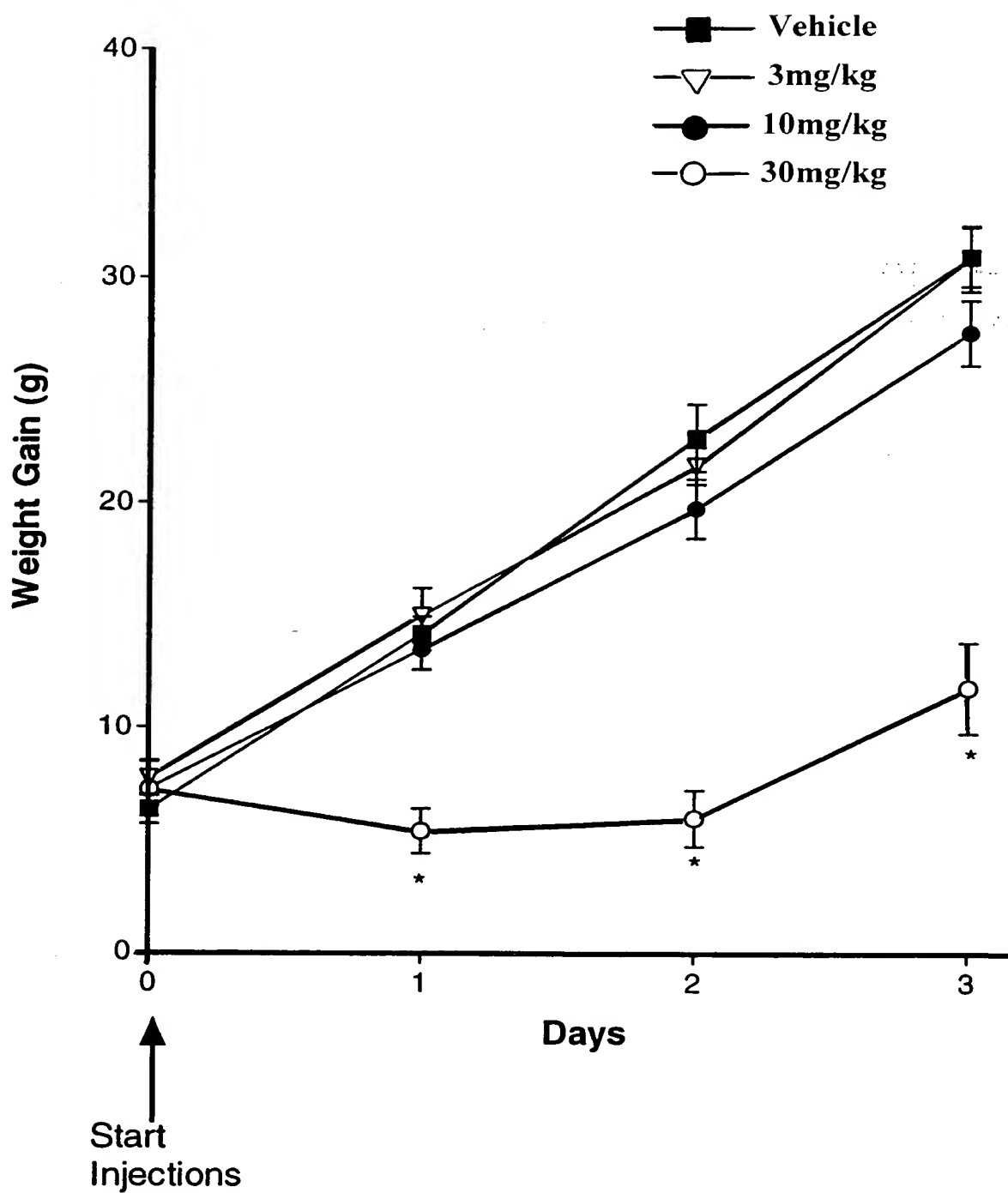
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FIGURE 22



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FIGURE 23



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FIGURE 24

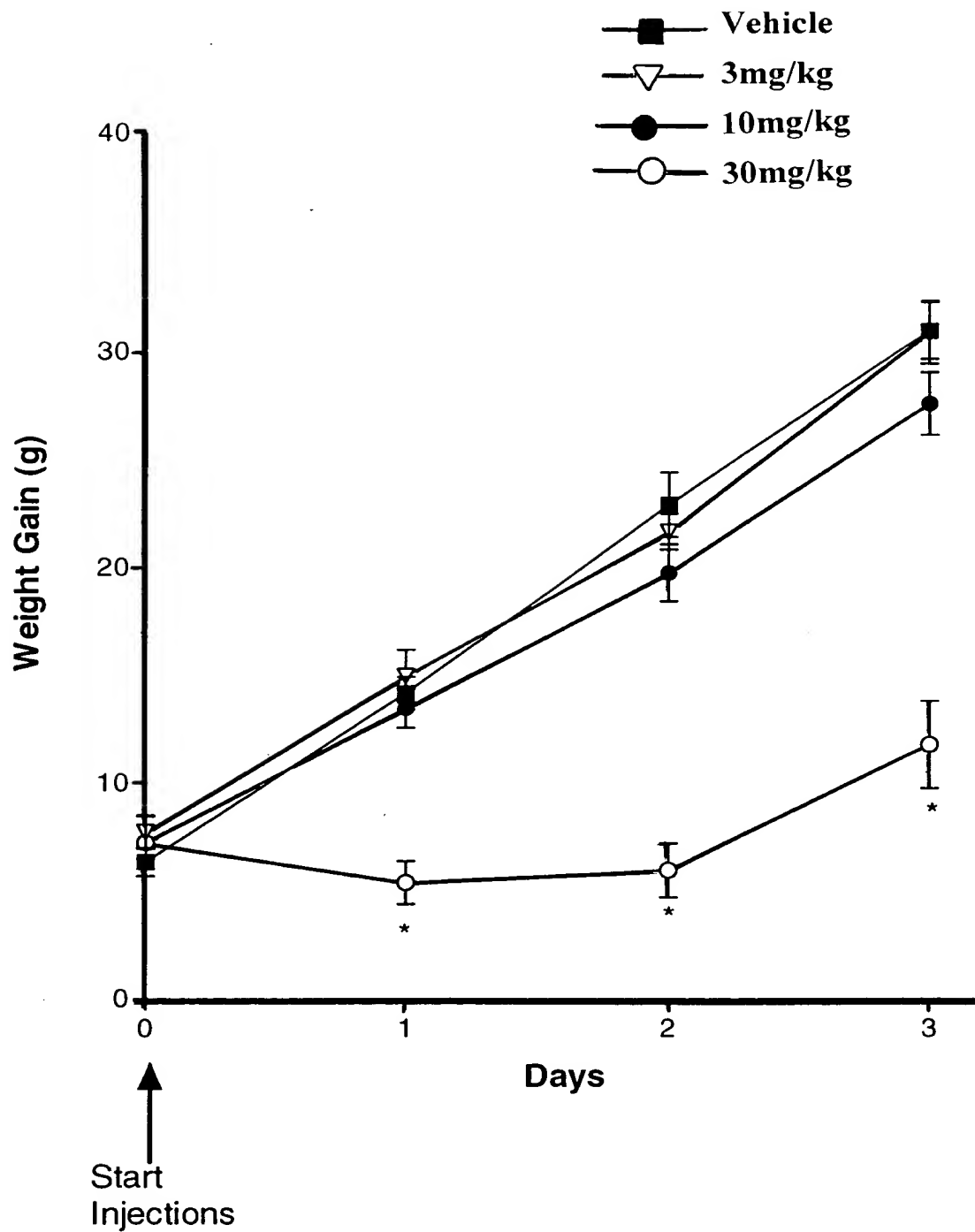
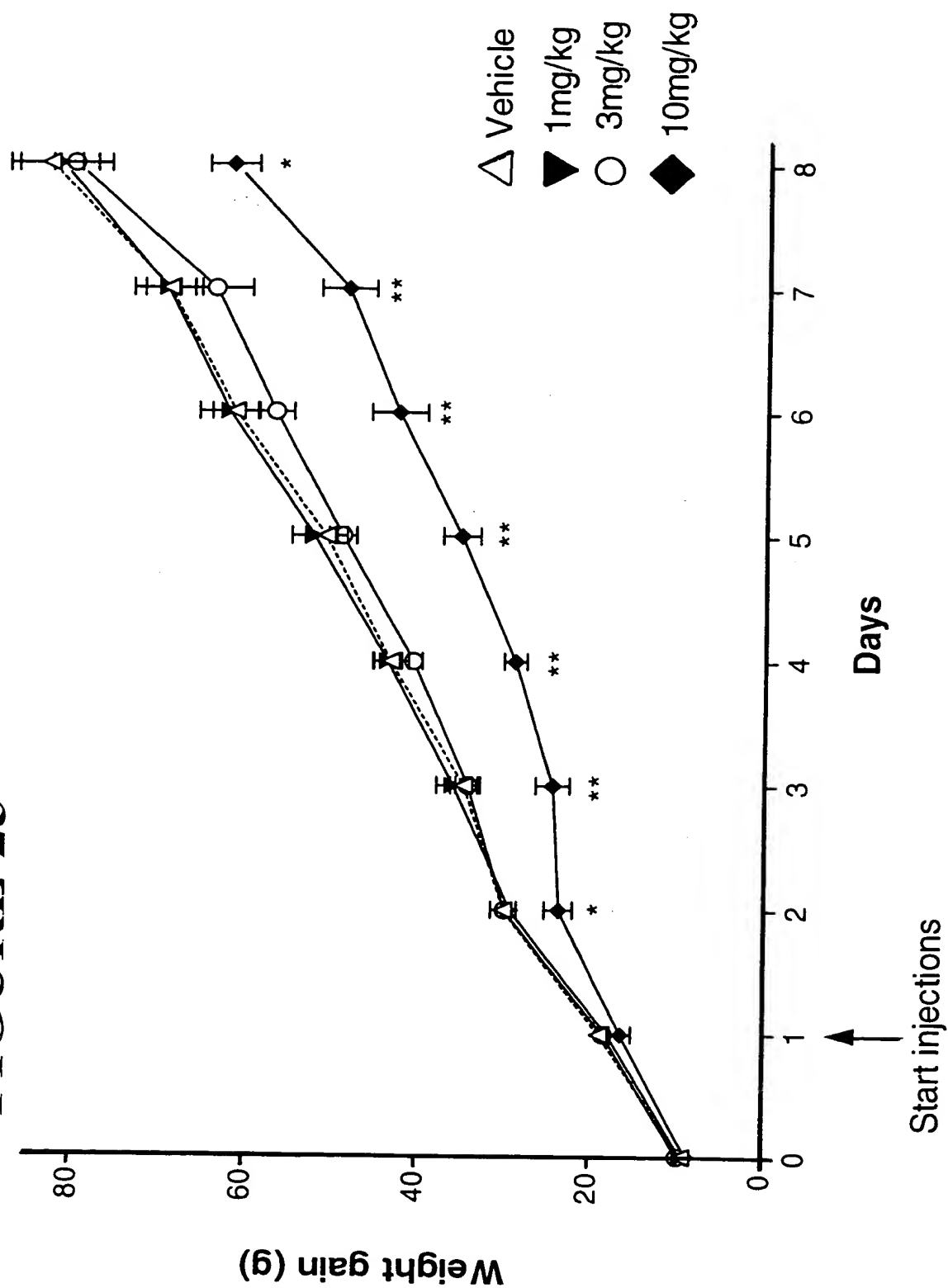


FIGURE 25



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FIGURE 26

